N THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. When strikethrough cannot easily be perceived, or when five or fewer characters are deleted, [[double brackets]] are used to show the deletion. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims 1, 7 and 16 in accordance with the following:

1. (currently amended) A method comprising:

outputting an optical signal having a chirping determined by a chirp parameter to an optical fiber transmission line, including generating said optical signal by optical modulation based on a modulating signal obtained by adding a redundancy code to a transmission data code;

converting the optical signal transmitted by said optical fiber transmission line into an electrical signal;

detecting a first error count when the chirp parameter is set to a positive value;

detecting a second error count when the chirp parameter is set to a negative value;

comparing the first error count with the second error count to provide a difference; and

controlling said chirp parameter in accordance with the difference so that bit error detected is reduced, suppressing chromatic dispersion and nonlinearity.

2. (previously presented) A method according to claim 1, wherein said controlling including switching the sign of said chirp parameter.

3. (previously presented) A method according to claim 2, wherein:

said outputting including generating said optical signal by optical modulation using a Mach-Zehnder optical modulator; and

controlling including switching an operating point of said Mach-Zehnder optical modulator.

4. (previously presented) A method according to claim 1, said outputting including adjusting said chirp parameter to an optimum value so that said bit error detected is minimized.

5. (previously presented) A method according to claim 4, wherein:

outputting including generating said optical signal by optical modulation using an electroabsorption optical modulator; and

controlling including changing a bias voltage to be applied to said electroabsorption optical modulator.

6. (cancelled)

7. (currently amended) A system comprising:

first and second terminal devices; and

an optical fiber transmission line connecting said first and second terminal devices;

said first terminal device comprising:

an optical transmitter outputting an optical signal having a chirping determined by a chirp parameter to said optical fiber transmission line, said optical transmitter generating said optical signal by optical modulation based on a modulating signal obtained by adding a redundancy code to a transmission data, and

a control unit controlling said chirp parameter according to a control signal, said control unit correcting said bit error of said electrical signal according to said redundancy code;

said second terminal device comprising:

an optical receiver converting the optical signal transmitted by said optical fiber transmission line into an electrical signal,

a monitor unit detecting a bit error of said electrical signal, said monitor unit comprising counting the number of corrections of said bit error obtained by said control unit, and

a transmitter to transmit supervisory information on said bit error detected to said first terminal device; wherein said control signal is generated in said first terminal device so that said bit error detected is reduced,

wherein the control unit determines a difference between a first error count detected when the chirp parameter is set to a positive value and a second error count detected when the chirp parameter

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is set to a negative value and generates the control signal based on the difference, suppressing chromatic dispersion and nonlinearity.

7 8. (previously presented) A system according to claim 6, wherein:

said optical transmitter comprises a light source outputting continuous wave (CW) light, and a Mach-Zehnder optical modulator for modulating said CW light to generate said optical signal; and

said control unit includes a switcher to switch an operating point of said Mach-Zehnder optical modulator, thereby switching the sign of said chirp parameter.

8 9. (previously presented) A system according to claim 6, wherein:

said optical transmitter comprises a light source for outputting continuous wave (CW) light, and an electroabsorption optical modulator for modulating said CW light to generate said optical signal; and

said control unit includes a changing unit to change a bias voltage to be applied to said electroabsorption optical modulator, thereby adjusting said chirp parameter to an optimum value so that said bit error detected is minimized.

9 10. (previously presented) A system according to claim 6, wherein:

said optical transmitter comprises a light source outputting continuous wave (CW) light, an encoder adding the redundancy code to the transmission data code to thereby generate the modulating signal, an optical modulator modulating said CW light according to said modulating signal to thereby generate said optical signal;

said optical receiver includes a decoder correcting said bit error of said electrical signal according to said redundancy code; and

said monitor unit includes a counter to count the number of corrections of said bit error obtained by said decoder.

10 11. (previously presented) A system according to claim 6, wherein:

said first terminal device further comprises an optical amplifier amplifying the optical signal output from said optical transmitter.

11 12. (previously presented) A system according to claim 6, wherein:

said second terminal device further comprises an optical amplifier amplifying the optical signal to be received by said optical receiver.

12 ~~13~~. (original) A system according to claim 6 ~~7~~, wherein said optical fiber transmission line is provided by a dispersion shifted fiber having a zero-dispersion wavelength near 1.55 μm.

13 ~~14~~. (original) A system according to claim 6 ~~7~~, wherein said optical fiber transmission line is provided by a single-mode fiber having a zero-dispersion wavelength near 1.3 μm.

14 ~~15~~. (previously presented) A system according to claim 13 ~~14~~, wherein said first terminal device further comprises a dispersion compensating fiber compensating for chromatic dispersion occurring in said optical fiber transmission line, and an optical amplifier amplifying the optical signal output from said optical transmitter.

15 ~~16~~. (currently amended) A terminal device comprising:

an optical transmitter outputting an optical signal having a chirping determined by a chirp parameter to an optical fiber transmission line, said optical signal generated by optical modulation based on a modulating signal obtained by adding a redundancy code to a transmission data code;

a receiver to receive supervisory information on a bit error detected in relation to the optical signal transmitted by said optical fiber transmission line; and

a controller to control said chirp parameter according to said supervisory information so that said bit error detected is reduced,

wherein said supervisory information includes a first error count detected when the chirp parameter is set to a positive value and a second error count detected when the chirp parameter is set to a negative value, and

wherein the controller determines a difference between the first error count and the second error count and controls the chirp parameter based on the difference, suppressing chromatic dispersion and nonlinearity.

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